III. REMARKS

Claims 1-20 are pending in this application. By this amendment, claims 1, 8 and 16 have been amended herein. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Furthermore, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the following remarks is requested.

Claims 1-15 are rejected under 35 U.S.C. 101 because the claimed invention is allegedly directed to non-statutory subject matter. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gardner (US Publication 2003/0177143 A1), hereinafter "Gardner".

In response to the rejection under §101, Applicants respond that independent claims 1 and 8 are both directed to statutory subject matter, as defined under 35 USC §101, and have a useful, concrete, and tangible result. For example, claim 1 provides, *inter alia*, a system for dynamically implementing a chain of Web services from a client on the World Wide Web to execute a workflow that includes *inter alia* a database for storing a list of available Web services *and* a selecting system that *inter alia* selects a Web service for each of a plurality of tasks in the workflow. See *e.g.,* claim 1. As a result, Applicants respectfully disagree with the Examiner's position and submits that the claimed invention does indeed have a claimed useful practical "real world" application

within the technological arts. For example, the claimed invention has a practical application in the technological art of automating the creation of workflows in a Web services environment, namely, providing a system for creating dynamic workflows using web service signature matching. As discussed, for example, in the "Related Art" portion of the disclosure (i.e., ¶¶0004-0008), the present invention benefits by creating more effective workflows involving bioinformatics and, more specifically, analyzing microarray data. Clearly, a database and selecting system as disclosed in the present invention is a useful, concrete and tangible result.

Claim 8 similarly provides, *inter alia*, a program product for executing a workflow by dynamically implementing Web services from a client on the World Wide Web that includes *inter alia* means for storing a list of available Web services and a means for forming a chain of Web services by selecting a Web service for each of a plurality of tasks in the workflow. See *e.g.,* claim 8. Similarly as discussed above with regards to claim 1 (e.g., creating effective workflows involving bioinformatics, etc.), claim 8 also clearly provides a useful, concrete and tangible result. As such, Applicants submit that the claimed invention is directed to statutory subject matter.

With respect to the rejection of claim 1 under 35 USC 102(e), Applicants submit that the reference cited by the Office, Gardner, does not teach each and every feature of the claimed invention, as is required under 102(e). For example, with respect to independent claim 1, Applicants respectfully submit that the cited reference fails to teach, *inter alia*, wherein the selecting system dynamically matches the input signature of a first

Web service with the output signature of an adjacent Web service to ensure that each

selected Web service is compatible with the adjacent Web service in the chain of Web

services. *See* claim 1 and similar language in independent claims 8 and 16.

In rejecting claim 1, the Office alleges that Gardner teaches the selecting system

et al. of the claimed invention as follows:

> "'[A]nd a selecting system for forming the chain of Web services by
> selecting a Web service for each of a plurality of tasks in the workflow,'
> (Figure 12, blocks 0051, 0052, and 0098, wherein workflow and
> automation tools organized a drug discovery process using various
> modules and tools) 'wherein the selecting system matches input and
> output signatures to ensure that each selected Web service is compatible
> with adjacent Web services in the chain of Web services.' (block 0049,
> wherein a data parser may be used for each type of database to process
> data)."

Office Action, page 4, item 6. Applicants assume that the term "block", as used

by the Office above, is meant to read "paragraph" and have responded accordingly.

A careful reading of the cited sections (i.e., figure 12, paragraphs 0049, 0051,

0052, and 0098), and Gardner in its entirety, indicates that Gardner is completely devoid

of any teaching or suggestion of any dynamic matching of input signatures and output

signature of adjacent Web services in order to aid in forming a chain of Web services, as

in the claimed invention. In fact, the salient portion of the specification in Gardner (i.e.,

paragraph 0049) that allegedly discloses the same type of signature matching as the

claimed invention merely discusses the functional block diagram at figure 2 of Gardner.

Further, the cited paragraph only discusses a general functionality of data parsers being

"used to import data from disparate databases" and "transform the content included therein into a common format for processing by bioinformatics system." There is no teaching of any type of, *inter alia*, input and output signature matching; adjacent Web services; forming a chain of Web services based on the dynamic matching, and the like. In sum, this cannot amount to a clear teaching and/or suggestion of the aforementioned limitation.

Thus, Gardner does not teach all of the limitations found in claim 1. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to claim 1.
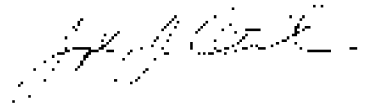
Independent claims 8 and 16 were rejected under the same rationale as claim 1. As a result, Applicants herein incorporate the arguments listed above with respect to claim 1.

With respect to dependent claims 2-7, 9-15 and 17-20 Applicants herein incorporate the arguments presented above with respect to the independent claims from which the claims depend. The dependent claims are believed to be allowable based on the above arguments, as well as for their own additional features.

IV. CONCLUSION

In light of the above remarks, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,

Date: January 22, 2007

/_____/
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